



52073US-03-11-04.ST25
SEQUENCE LISTING

<110> McNEEL, Douglas G.
<120> METHODS AND COMPOSITIONS FOR TREATING PROSTATE CANCER USING DNA
VACCINES
<130> 011335.52703US
<140> 10/669,474
<141> 2003-09-25
<150> 60/413,777
<151> 2002-09-27
<160> 3
<170> PatentIn version 3.2
<210> 1
<211> 386
<212> PRT
<213> Homo sapiens
<400> 1

Met Arg Ala Ala Pro Leu Leu Leu Ala Arg Ala Ala Ser Leu Ser Leu
1 5 10 15

Gly Phe Leu Phe Leu Leu Phe Phe Trp Leu Asp Arg Ser Val Leu Ala
20 25 30

Lys Glu Leu Lys Phe Val Thr Leu Val Phe Arg His Gly Asp Arg Ser
35 40 45

Pro Ile Asp Thr Phe Pro Thr Asp Pro Ile Lys Glu Ser Ser Trp Pro
50 55 60

Gln Gly Phe Gly Gln Leu Thr Gln Leu Gly Met Glu Gln His Tyr Glu
65 70 75 80

Leu Gly Glu Tyr Ile Arg Lys Arg Tyr Arg Lys Phe Leu Asn Glu Ser
85 90 95

Tyr Lys His Glu Gln Val Tyr Ile Arg Ser Thr Asp Val Asp Arg Thr
100 105 110

Leu Met Ser Ala Met Thr Asn Leu Ala Ala Leu Phe Pro Pro Glu Gly
115 120 125

Val Ser Ile Trp Asn Pro Ile Leu Leu Trp Gln Pro Ile Pro Val His
130 135 140

Thr Val Pro Leu Ser Glu Asp Gln Leu Leu Tyr Leu Pro Phe Arg Asn
145 150 155 160

Cys Pro Arg Phe Gln Glu Leu Glu Ser Glu Thr Leu Lys Ser Glu Glu
165 170 175

Phe Gln Lys Arg Leu His Pro Tyr Lys Asp Phe Ile Ala Thr Leu Gly
 180 185 190

Lys Leu Ser Gly Leu His Gly Gln Asp Leu Phe Gly Ile Trp Ser Lys
 195 200 205

Val Tyr Asp Pro Leu Tyr Cys Glu Ser Val His Asn Phe Thr Leu Pro
 210 215 220

Ser Trp Ala Thr Glu Asp Thr Met Thr Lys Leu Arg Glu Leu Ser Glu
 225 230 235 240

Leu Ser Leu Leu Ser Leu Tyr Gly Ile His Lys Gln Lys Glu Lys Ser
 245 250 255

Arg Leu Gln Gly Gly Val Leu Val Asn Glu Ile Leu Asn His Met Lys
 260 265 270

Arg Ala Thr Gln Ile Pro Ser Tyr Lys Lys Leu Ile Met Tyr Ser Ala
 275 280 285

His Asp Thr Thr Val Ser Gly Leu Gln Met Ala Leu Asp Val Tyr Asn
 290 295 300

Gly Leu Leu Pro Pro Tyr Ala Ser Cys His Leu Thr Glu Leu Tyr Phe
 305 310 315 320

Glu Lys Gly Glu Tyr Phe Val Glu Met Tyr Tyr Arg Asn Glu Thr Gln
 325 330 335

His Glu Pro Tyr Pro Leu Met Leu Pro Gly Cys Ser Pro Ser Cys Pro
 340 345 350

Leu Glu Arg Phe Ala Glu Leu Val Gly Pro Val Ile Pro Gln Asp Trp
 355 360 365

Ser Thr Glu Cys Met Thr Thr Asn Ser His Gln Gly Thr Glu Asp Ser
 370 375 380

Thr Asp
 385

<210> 2
 <211> 381
 <212> PRT
 <213> Mus musculus

<400> 2

Met Arg Ala Val Pro Leu Pro Leu Ser Arg Thr Ala Ser Leu Ser Leu
 1 5 10 15

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Gly Phe Leu Leu Leu Leu Ser Leu Cys Leu Asp Pro Gly Gln Ala Lys
20 25 30

Glu Leu Lys Phe Val Thr Leu Val Phe Arg His Gly Asp Arg Gly Pro
35 40 45

Ile Glu Thr Phe Pro Thr Asp Pro Ile Thr Glu Ser Ser Trp Pro Gln
50 55 60

Gly Phe Gly Gln Leu Thr Gln Trp Gly Met Glu Gln His Tyr Glu Leu
65 70 75 80

Gly Ser Tyr Ile Arg Lys Arg Tyr Gly Arg Phe Leu Asn Asp Thr Tyr
85 90 95

Lys His Asp Gln Ile Tyr Ile Arg Ser Thr Asp Val Asp Arg Thr Leu
100 105 110

Met Ser Ala Met Thr Asn Leu Ala Ala Leu Phe Pro Pro Glu Gly Ile
115 120 125

Ser Ile Trp Asn Pro Arg Leu Leu Trp Gln Pro Ile Pro Val His Thr
130 135 140

Val Ser Leu Ser Glu Asp Arg Leu Leu Tyr Leu Pro Phe Arg Asp Cys
145 150 155 160

Pro Arg Phe Glu Glu Leu Lys Ser Glu Thr Leu Glu Ser Glu Glu Phe
165 170 175

Leu Lys Arg Leu His Pro Tyr Lys Ser Phe Leu Asp Thr Leu Ser Ser
180 185 190

Leu Ser Gly Phe Asp Asp Gln Asp Leu Phe Gly Ile Trp Ser Lys Val
195 200 205

Tyr Asp Pro Leu Phe Cys Glu Ser Val His Asn Phe Thr Leu Pro Ser
210 215 220

Trp Ala Thr Glu Asp Ala Met Ile Lys Leu Lys Glu Leu Ser Glu Leu
225 230 235 240

Ser Leu Leu Ser Leu Tyr Gly Ile His Lys Gln Lys Glu Lys Ser Arg
245 250 255

Leu Gln Gly Gly Val Leu Val Asn Glu Ile Leu Lys Asn Met Lys Leu
260 265 270

Ala Thr Gln Pro Gln Lys Tyr Lys Lys Leu Val Met Tyr Ser Ala His
275 280 285

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Asp Thr Thr Val Ser Gly Leu Gln Met Ala Leu Asp Val Tyr Asn Gly
290 295 300

Val Leu Pro Pro Tyr Ala Ser Cys His Met Met Glu Leu Tyr His Asp
305 310 315 320

Lys Gly Gly His Phe Val Glu Met Tyr Tyr Arg Asn Glu Thr Gln Asn
325 330 335

Glu Pro Tyr Pro Leu Thr Leu Pro Gly Cys Thr His Ser Cys Pro Leu
340 345 350

Glu Lys Phe Ala Glu Leu Leu Asp Pro Val Ile Ser Gln Asp Trp Ala
355 360 365

Thr Glu Cys Met Ala Thr Ser Ser His Gln Gly Arg Asn
370 375 380

<210> 3
<211> 381
<212> PRT
<213> Rattus norvegicus

<400> 3

Met Arg Ala Val Pro Leu His Leu Val Gly Thr Ala Ser Leu Thr Leu
1 5 10 15

Gly Phe Leu Leu Leu Ser Leu Arg Leu Asp Pro Gly Gln Ala Lys
20 25 30

Glu Leu Lys Phe Val Thr Leu Val Phe Arg His Gly Asp Arg Gly Pro
35 40 45

Ile Glu Thr Phe Pro Asn Asp Pro Ile Lys Glu Ser Ser Trp Pro Gln
50 55 60

Gly Phe Gly Gln Leu Thr Lys Trp Gly Met Gly Gln His Tyr Glu Leu
65 70 75 80

Gly Ser Tyr Ile Arg Arg Arg Tyr Gly Arg Phe Leu Asn Asn Ser Tyr
85 90 95

Lys His Asp Gln Val Tyr Ile Arg Ser Thr Asp Val Asp Arg Thr Leu
100 105 110

Met Ser Ala Met Thr Asn Leu Ala Ala Leu Phe Pro Pro Glu Gly Ile
115 120 125

Ser Ile Trp Asn Pro Arg Leu Leu Trp Gln Pro Ile Pro Val His Thr
130 135 140

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Val Ser Leu Ser Glu Asp Arg Leu Leu Tyr Leu Pro Phe Arg Asp Cys
 145 150 155 160
 Pro Arg Phe Gln Glu Leu Lys Ser Glu Thr Leu Lys Ser Glu Glu Phe
 165 170 175
 Leu Lys Arg Leu Gln Pro Tyr Lys Ser Phe Ile Asp Thr Leu Pro Ser
 180 185 190
 Leu Ser Gly Phe Glu Asp Gln Asp Leu Phe Glu Ile Trp Ser Arg Leu
 195 200 205
 Tyr Asp Pro Leu Tyr Cys Glu Ser Val His Asn Phe Thr Phe Arg Thr
 210 215 220
 Trp Ala Thr Glu Asp Ala Met Thr Lys Leu Lys Glu Leu Ser Glu Leu
 225 230 235 240
 Ser Leu Leu Ser Leu Tyr Gly Ile His Lys Gln Lys Glu Lys Ser Arg
 245 250 255
 Leu Gln Gly Gly Val Leu Val Asn Glu Ile Leu Lys Asn Met Lys Leu
 260 265 270
 Ala Thr Gln Pro Gln Lys Ala Arg Lys Leu Ile Met Tyr Ser Ala Tyr
 275 280 285
 Asp Thr Thr Val Ser Gly Leu Gln Met Ala Leu Glu Leu Tyr Asn Gly
 290 295 300
 Leu Leu Pro Pro Tyr Ala Ser Cys His Ile Met Glu Leu Tyr Gln Asp
 305 310 315 320
 Asn Gly Gly Thr Phe Val Glu Met Tyr Tyr Arg Asn Glu Thr Gln Asn
 325 330 335
 Glu Pro Tyr Pro Leu Thr Leu Pro Gly Cys Thr His Ser Cys Pro Leu
 340 345 350
 Glu Lys Phe Ala Glu Leu Leu Asp Pro Val Ile Pro Gln Asp Trp Ala
 355 360 365
 Thr Glu Cys Met Gly Thr Ser Asn His Gln Ala Ser Leu
 370 375 380